IPSC 48860 #11
Air Quality 0002

INTERMOUNTAIN POWER SERVICE CORPORATION

April 30, 2007

Richard Sprott, Director
Division of Air Quality
Department of Environmental Quality
P.O. Box 144820
Salt Lake City, UT 84114-4820

Attention: Jesse McDonald, Compliance Section

Dear Director Sprott:

IPSC PSD Compliance Report

The Intermountain Power Service Corporation (IPSC) is herein providing information to demonstrate compliance with federally enforceable limits set as conditions within our applicable Title V operating permit and approval order (AO). This report is required by the following conditions that were effective during the reporting period:

> Title V Operating Permit #2700010002 (Issued 8/8/2003, Amended 4/14/2005), Conditions II.B.2.f and II.B.2.g
>
> AO DAQE-AN0327015-05, Conditions 25 and 26

These conditions require IPSC to prove there were no significant emission increases of pollutants regulated under Prevention of Significant Deterioration (PSD) rules that were attributable to modifications performed by IPSC under AO DAQE-049-02 and the addition of overfire air. The specific PSD requirement implemented by these permits is promulgated as the "WEPCO" rule (see 40 CFR 52.21 and R307-101), which requires comparisons of emissions before and after source modifications.

Compliance Provisions

In order to avoid PSD major modification permitting, a modification cannot result in significant emission increases. Under the WEPCO rule, modifications can be permitted as minor if the permittee can represent projections that, all other things equal, post modification actual emissions are predicted to be less than significant increases from the actual emissions prior to the proposed change. IPSC followed this requirement when obtaining the approval to make the permitted modifications.

To show compliance with the WEPCO rule after the modifications have occurred, IPSC must compare two year actual emissions prior to the modification to actual emissions after the modification. If a significant increase in any PSD pollutant emission attributable to the modification is shown to have occurred, IPSC must then undergo a full PSD major modification process for that pollutant.

850 West Brush Wellman Road, Delta, Utah 84624 / Telephone: (435) 864-4414 / FAX: (435) 864-6670 / Fed. I.D. #87-0388573

WEPCO allows the source to discount those emission increases not attributable to the modification. PSD provisions prevent using decreases when no netting is performed in permitting, as was the case in this particular permitting action. The permitted modifications affecting emissions at IGS are tied to increased heat input for higher generating capacity. Any emission increases not associated with the change can be excluded from the pre- and post-change emission comparison. These excluded emissions can be from nonmodification related parameters such as demand growth, changes in fuel quality, operational variability in overall pollution control efficiency, operating hours, or those emissions that could have been otherwise accommodated during the baseline period. None of the modifications were nonroutine replacements to accommodate forced outages. Accordingly, IPSC is not prevented to use changes in hours of operation to exclude emissions from either unit at IGS. (See the EPA policy determination letter to Henry V Nickel on Detroit Edison, 5/23/00.)

WEPCO Compliance Analysis

Presented in Table 1 below are the pollutant-by-pollutant compliance determinations as required by permit and the WEPCO rule. The calculations used take into consideration the ability to adjust and discount actual emissions by subtracting emission increases from operational differences not attributable to the modifications. These include adjustments for coal quality, control technology variability, hours of operation, or those emissions that could have been otherwise accommodated during the baseline period. For purposes of the permitting modifications tied to the IGS Dense Pack Project, the positive reducing effects from the use of overfire air must be added back onto the actual compliance period emissions. Since NO_X is the only pollutant beneficially affected by overfire air (OFA), the adjustments for OFA apply only to it. Table 1 clearly illustrates that the WEPCO test has been met for PSD pollutants applicable to IGS.

Fuel Quality and Control Variability

Variability in coal characteristics have an ultimate impact on emissions. Fuel parameters such as sulfur, nitrogen, volatiles, ash content, and trace metal concentrations influence the rate and form of the respective emitted counterparts. Pollutant loading also has an impact on the performance of applicable pollution control devices. For instance, higher loading of inlet sulfur compounds to the wet limestone scrubbers cause a concomitant decrease in overall efficiency when operating at capacity. IPSC has developed from baseline data the relationship of how changes in fuel quality will affect emissions, particularly for NO_X and SO_2.

IPSC is calculating excluded emissions based upon the actual operating data from the baseline period. IPSC has developed curve relationships between coal quality and control device response and changes in actual emissions. In practice, IPSC back calculates, based on this relationship, what the emissions for a given pollutant would have been had that particular fuel been used during the baseline period. Operating parameters from the baseline period, such as heat input, are used to make this calculation to ensure it is distinct from emissions that could be attributable to the modification. The difference from what could have been accommodated during the baseline period if this fuel was used and the actual baseline emission rate are those emissions not related to the change, and are therefore excluded, and thus deductible from any emission increase.

Hours of Operation

Nothing in either the Dense Pack Project or the OFA addition affected the forced outage rate for either IGS Units 1 or 2. IPSC has no history of forced outages due to any equipment modified

under either permitted action. Thus, variability in year-to-year operating hours is utilized to compare directly that no significant emissions increase from the modifications occurred. As WEPCO dictates, even though the ultimate test is in tons per year comparisons, emissions are reduced to lbs per hour rates, and then calculated back to tons per year using equal hours of operation. This provides a direct measurement indicating any attributable emission increases.

Discounted OFA Control

For purposes of proving WEPCO compliance solely for the Dense Pack Project, IPSC must discount the beneficial NO_X control aspects of the overfire air system. That is, emission decreases provided by OFA must be added back to the actual emissions to demonstrate that the Dense Pack Project itself did not cause a significant emissions increase of any pollutant. IPSC has substantial operational data to predict the effect of OFA at modified capacities.

WEPCO Methodology

To present consistency in year-to-year reporting, IPSC is providing an overview of formulae, bases for calculations, and sources of data in the attached spreadsheets. Outlined in them are descriptions of those components used for calculating WEPCO compliance on a plant wide basis as well as unit by unit.

Conclusion

IPSC has demonstrated that no significant increase has occurred for any pollutant as a result of modifications at IGS. This completes the report for showing compliance with PSD determinations for the IGS Dense Pack modifications. All supporting documentation upon which this compliance report is based is available for review at the IGS site as required by rule and permit.

If you have any questions or clarifications, please contact Mr. Dennis Killian, Superintendent of technical Services and (435) 864-4414, or dennis-k@ipsc.com.

In as much as this notice of intent may affect our Title V Operating Permit, I hereby certify that, based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete.

Cordially,

George W. Cross

George Cross
President, Chief Operations Officer, and Title V Responsible Official

RJC/BP:jmj
Enclosure: Computational Spreadsheets
cc: Blaine Ipson, IPSC
James Holtkamp, Holland & Hart
Thomas S. Snyder, LADWP

TABLE 1 - WEPCO Emission Test - IGS

Pollutant	Baseline Emissions (3/1/2000-2/28/2002	Post change Emissions (4/2006-3/2007)	Difference increase / (decrease)	PSD Significance
Nitrogen Oxides (w/OFA)	26,910	24,429	(2,481)	40
Nitrogen Oxides (w/o OFA)	26,910	25,611	(1,299)	40
Sulfur Dioxide	3,901	3,383	(518)	40
PM (Stack)	290	200	(91)	25
PM10 (Stack)	267	184	(83)	15
Ozone (VOCs)	12.2	13.3	1.1	40
Lead	0.08	0.05	(0.03)	0.6
Beryllium	0.00089	0.00056	(0.00033)	0.0004
Mercury	0.081	0.087	0.006	0.1
Fluorides	10.7	11.6	0.9	3
Sulfuric Acid	8.2	9.6	1.3	7
Other sulfur compounds	64.3	69.1	4.8	10

NOTE: Values are in tons, and have been adjusted to disallow OFA benefits and to exclude emissions not attributable to the modifications. Baselines are shown on a hour equivalent basis. The table presents only those PSD pollutants reasonably expected to be emitted by IGS. Other sulfur compounds include total reduced sulfur and reduced sulfur compounds (TRS/RSC).

IPSC Reporting Year Summary Data

NOx rolling 12 month totals

	UNIT ONE														
12 month ending	Actual NOx Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative NOx rate	Restructured NOx Baseline	Excluded Emissions	Non-OFA Predicted NOx Rate	Non-OFA Predicted NOx tons	Difference from Actuals (Disalllowed Add-back)	Discounted Actual Emissions	Baseline (adjusted)	Actual OFA Emissions difference from baseline	Discounted OFA Actuals Difference from Baseline	PSD? (>40ton)
Jun-06	13325	7.08E+13	8,597	32760	0.926	0.435	14387	252	0.37771732	13364	39	13112	14135	-1063	-1023	N
Sep-06	13830	7.20E+13	8,727	33710	0.937	0.436	14645	295	0.37863071	13626	0	13534	14349	-815	-815	N
Dec-06	14388	7.22E+13	8,748	34559	0.957	0.439	14754	371	0.38036194	13734	0	14017	14383	-366	-366	N
Mar-07	14444	7.20E+13	8,722	35470	0.985	0.442	14812	472	0.38271901	13783	0	13973	14341	-368	-368	N

	UNIT TWO														
12 month ending	Actual NOx Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative NOx rate	Restructured NOx Baseline	Excluded Emissions	Non-OFA Predicted NOx Rate	Non-OFA Predicted NOx tons	Difference from Actuals (Disallowed Add-back)	Discounted Actual Emissions	Baseline (adjusted)	Actual OFA Emissions difference from baseline	Discounted OFA Actuals Difference from Baseline	PSD? (>40ton)
Jun-06	10269	6.41E+13	7,828	30037	0.937	0.436	13074	828	0.37862924	12142	1873	11314	12246	-2805	-932	N
Sep-06	10394	6.53E+13	7,942	31111	0.953	0.438	13319	894	0.38002783	12404	2010	11510	12425	-2925	-915	N
Dec-06	11025	6.58E+13	8,014	32201	0.978	0.441	13524	986	0.3821509	12580	1555	11594	12538	-2499	-944	N
Mar-07	11545	6.62E+13	8,035	33350	1.008	0.444	13658	1089	0.38467828	12727	1182	11638	12569	-2113	-931	N

SO2 rolling 12 month totals

	UNIT ONE											
12 month ending	Actual SO2 Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative BaselineSO2 rate	Restructured SO2 Baseline	Excluded Emissions	Discounted Actual Emissions	Baseline (adjusted)	Discounted Actuals Difference from Baseline	PSD? (>40ton)
Jun-06	1922	7.08E+13	8,597	32760	0.926	0.070	2316	345	1577	1971	-394	N
Sep-06	2088	7.20E+13	8,727	33710	0.937	0.072	2406	406	1683	2000	-318	N
Dec-06	2229	7.22E+13	8,748	34559	0.957	0.075	2518	513	1717	2005	-289	N
Mar-07	2359	7.20E+13	8,722	35470	0.985	0.079	2659	659	1700	1999	-300	N

	UNIT TWO											
12 month ending	Actual SO2 Emissions	Heat Input	Operating Hours	Inlet SO2 tons	Effective 12mr Inlet SO2 rate	Representative BaselineSO2 rate	Restructured SO2 Baseline	Excluded Emissions	Discounted Actual Emissions	Baseline (adjusted)	Discounted Actuals Difference from Baseline	PSD? (>40ton)
Jun-06	1650	6.41E+13	7,828	30037	0.937	0.068	2030	177	1473	1853	-379	N
Sep-06	1789	6.53E+13	7,942	31111	0.953	0.070	2132	253	1536	1880	-344	N
Dec-06	2009	6.58E+13	8,014	32201	0.978	0.074	2266	369	1640	1897	-257	N
Mar-07	2194	6.62E+13	8,035	33350	1.008	0.078	2413	511	1683	1902	-218	N

IPSC Reporting Year Summary Data

Stack PM rolling 12 month totals

	UNIT ONE									
12 month ending	Actual PM Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>25ton)
Jun-06	109	7.07E+13	0.00308	8,597	102	0	109	187	-78	N
Sep-06	112	7.20E+13	0.00310	8,727	104	0	112	189	-78	N
Dec-06	112	7.22E+13	0.00310	8,748	104	0	112	190	-78	N
Mar-07	112	7.20E+13	0.00310	8,722	104	0	112	189	-78	N

	UNIT TWO									
12 month ending	Actual PM Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>25ton)
Jun-06	99	6.41E+13	0.00308	7,828	92	0	99	99	0	N
Sep-06	98	6.52E+13	0.00300	7,942	91	0	98	100	-2	N
Dec-06	93	6.58E+13	0.00283	8,014	87	0	93	101	-8	N
Mar-07	88	6.61E+13	0.00267	8,035	82	0	88	101	-13	N

Stack PM10 rolling 12 month totals

	UNIT ONE									
12 month ending	Actual PM10 Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>15ton)
Jun-06	100	7.07E+13	0.00283	8,597	94	0	100	172	-71.6	N
Sep-06	103	7.20E+13	0.00285	8,727	96	0	103	174	-71.6	N
Dec-06	103	7.22E+13	0.00285	8,748	96	0	103	175	-71.7	N
Mar-07	103	7.20E+13	0.00285	8,722	96	0	103	174	-71.4	N

	UNIT TWO									
12 month ending	Actual PM10 Emissions	Heat Input	Effective Emission Rate	Operating Hours	Restructured Baseline	Discounted Emissions	Adjusted Actual Emissions	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>15ton)
Jun-06	91	6.41E+13	0.00283	7,828	85	0	91	91	0.1	N
Sep-06	90	6.52E+13	0.00276	7,942	84	0	90	92	-2.0	N
Dec-06	86	6.58E+13	0.00260	8,014	80	0	86	93	-7.2	N
Mar-07	81	6.61E+13	0.00246	8,035	76	0	81	93	-11.9	N

Beryllium rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Be Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.0004ton)	Actual Be Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.0004 ton)
Jun-06	0.0003	8,597	0.0006	-0.0003	N	0.0003	7,828	0.0003	0.0000	N
Sep-06	0.0003	8,727	0.0006	-0.0003	N	0.0003	7,942	0.0003	0.0000	N
Dec-06	0.0003	8,748	0.0006	-0.0003	N	0.0003	8,014	0.0003	0.0000	N
Mar-07	0.0003	8,722	0.0006	-0.0003	N	0.0002	8,035	0.0003	-0.0001	N

Lead rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Pb Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.6ton)	Actual Pb Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.6ton)
Jun-06	0.0301	8,597	0.0514	-0.0213	N	0.0272	7,828	0.0315	-0.0043	N
Sep-06	0.0302	8,727	0.0522	-0.0220	N	0.0265	7,942	0.0320	-0.0054	N
Dec-06	0.0301	8,748	0.0523	-0.0222	N	0.0254	8,014	0.0323	-0.0069	N
Mar-07	0.0295	8,722	0.0522	-0.0227	N	0.0238	8,035	0.0323	-0.0086	N

Mercury rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual Hg Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.1ton)	Actual Hg Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>0.1ton)
Jun-06	0.0449	8,597	0.0415	0.0034	N	0.0408	7,828	0.0379	0.0029	N
Sep-06	0.0457	8,727	0.0422	0.0035	N	0.0415	7,942	0.0385	0.0031	N
Dec-06	0.0455	8,748	0.0422	0.0032	N	0.0416	8,014	0.0388	0.0027	N
Mar-07	0.0452	8,722	0.0421	0.0031	N	0.0416	8,035	0.0389	0.0027	N

Flouride rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual HF Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>3ton)	Actual HF Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>3ton)
Jun-06	5.9953	8,597	5.4851	0.5102	N	5.4484	7,828	5.0078	0.4406	N
Sep-06	6.0967	8,727	5.5682	0.5285	N	5.5430	7,942	5.0807	0.4622	N
Dec-06	6.0714	8,748	5.5813	0.4901	N	5.5451	8,014	5.1270	0.4182	N
Mar-07	6.0372	8,722	5.5649	0.4723	N	5.5541	8,035	5.1399	0.4142	N

Sulfuric Acid rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual H2SO4 Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>7ton)	Actual H2SO4 Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>7ton)
Jun-06	4.5890	8,597	4.2471	0.3418	N	4.1542	7,828	3.8384	0.3159	N
Sep-06	4.7358	8,727	4.3115	0.4244	N	4.3048	7,942	3.8943	0.4105	N
Dec-06	4.8649	8,748	4.3216	0.5434	N	4.4535	8,014	3.9297	0.5238	N
Mar-07	4.9743	8,722	4.3089	0.6654	N	4.5984	8,035	3.9396	0.6587	N

Total Reduced Sulfur / Reduced Sulfur Compounds (TRS/RSC) rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual TRS/RSC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>10ton)	Actual TRS/RSC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>10ton)
Jun-06	35.3809	8,597	33.0654	2.3155	N	32.0678	7,828	29.9659	2.1018	N
Sep-06	35.9885	8,727	33.5664	2.4221	N	32.6401	7,942	30.4023	2.2377	N
Dec-06	36.1084	8,748	33.6453	2.4632	N	32.9185	8,014	30.6789	2.2396	N
Mar-07	36.0144	8,722	33.5462	2.4682	N	33.0851	8,035	30.7564	2.3287	N

Ozone (Volatile Organic Compounds) rolling 12 month totals

	UNIT ONE					UNIT TWO				
12 month ending	Actual VOC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>40ton)	Actual VOC Emissions	Operating Hours	Baseline (adjusted)	Actuals Difference from Baseline	PSD? (>40ton)
Jun-06	6.8499	8,597	6.2651	0.5849	N	6.2350	7,828	5.6732	0.5618	N
Sep-06	6.9644	8,727	6.3600	0.6044	N	6.3432	7,942	5.7559	0.5873	N
Dec-06	6.9360	8,748	6.3749	0.5611	N	6.3444	8,014	5.8082	0.5362	N
Mar-07	6.8944	8,722	6.3562	0.5383	N	6.3603	8,035	5.8229	0.5373	N

PRODUCTION DATA

Combustion Emission Units

Unit 1

Month	Coal Throughput (tons)	Fuel Oil Throughput (gallons)	SS&M Outage Excess Emissions (lbs)	SS&M PM	SS&M PM10	Operating Hours	Heat Input (coal)	Heat Input (oil)	Inlet Sulfur Rate	Inlet Sulfur tons	Outlet SO2 Tons	NOx Rate	NOx tons	PM Emission Rate (lb/mmbtu)	PM Tons	PM10 Tons	BE Emission Factor (coal)	Be tons (coal)	Be tons (oil)	Lead Emission Factor (coal)	Lead tons (coal)	Lead tons (oil)	Mercury tons (coal)	Mercury tons (oil)	Flourides Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Ozone (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Ozone (VOCs) tons (oil EPRI)
Apr-06	230,874	33,600	0	0.0	0.0	720.0	5.54E+12	4.69E+09	0.89	2452.9	141.3	0.384	1064.3	0.0031	8.6	7.9	0.0106	0.0000292	0.0000003	0.9389670	0.0026003	0.0000115	0.0032	0.0000002	0.46	0.36	0.0008	2.77	0.50	0.02	0.0034	0.00007
May-06	241,588	26,714	0	0.0	0.0	744.0	5.73E+12	3.72E+09	0.99	2827.4	197.7	0.395	1132.7	0.0031	8.9	8.2	0.0090	0.0000258	0.0000003	0.8372095	0.0023992	0.0000091	0.0034	0.0000002	0.48	0.40	0.0009	2.87	0.52	0.02	0.0027	0.00006
Jun-06	263,241	10,120	0	0.0	0.0	720.0	6.06E+12	1.41E+09	0.99	3007.8	179.7	0.409	1238.9	0.0031	9.4	8.6	0.0083	0.0000252	0.0000001	0.7906710	0.0023944	0.0000035	0.0037	0.0000001	0.53	0.40	0.0002	3.03	0.56	0.02	0.0010	0.00002
Jul-06	268,534	2,250	0	0.0	0.0	744.0	6.30E+12	3.15E+08	0.97	3047.4	216.7	0.409	1288.9	0.0031	9.8	9.0	0.0082	0.0000257	0.0000000	0.7790142	0.0024549	0.0000008	0.0037	0.0000000	0.54	0.44	0.0001	3.15	0.58	0.03	0.0002	0.00000
Aug-06	258,980	16,115	2,900	0.9	0.6	731.8	6.06E+12	2.24E+09	0.98	2977.4	201.6	0.392	1188.5	0.0031	9.4	8.6	0.0084	0.0000254	0.0000002	0.7928328	0.0024030	0.0000055	0.0036	0.0000001	0.52	0.41	0.0004	3.03	0.56	0.02	0.0016	0.00003
Sep-06	261,753	17,458	0	0.0	0.0	720.0	6.06E+12	2.43E+09	0.97	2945.6	192.6	0.406	1230.4	0.0031	9.4	8.6	0.0082	0.0000247	0.0000002	0.7790142	0.0023598	0.0000059	0.0036	0.0000001	0.52	0.41	0.0007	3.03	0.56	0.02	0.0017	0.00004
Oct-06	265,796	6,815	0	0.0	0.0	744.0	6.25E+12	9.45E+08	1.04	3245.3	258.2	0.423	1322.5	0.0031	9.7	8.9	0.0090	0.0000280	0.0000001	0.8341582	0.0026076	0.0000023	0.0037	0.0000001	0.53	0.47	0.0002	3.13	0.57	0.03	0.0007	0.00001
Nov-06	254,801	5,822	0	0.0	0.0	720.0	6.02E+12	8.08E+08	1.01	3032.4	216.1	0.415	1248.5	0.0031	9.3	8.6	0.0094	0.0000283	0.0000001	0.8625566	0.0025945	0.0000020	0.0035	0.0000000	0.51	0.43	0.0002	3.01	0.55	0.02	0.0006	0.00001
Dec-06	264,276	6,883	0	0.0	0.0	744.0	6.21E+12	9.60E+08	0.98	3054.5	181.2	0.410	1274.0	0.0031	9.6	8.9	0.0105	0.0000326	0.0000001	0.9358061	0.0029074	0.0000024	0.0037	0.0000001	0.53	0.42	0.0002	3.11	0.57	0.03	0.0007	0.00001
Jan-07	264,256	3,593	0	0.0	0.0	744.0	6.20E+12	5.00E+08	0.96	2976.0	164.6	0.390	1209.0	0.0031	9.6	8.8	0.0104	0.0000323	0.0000000	0.9311095	0.0028862	0.0000012	0.0037	0.0000000	0.53	0.42	0.0001	3.10	0.57	0.03	0.0004	0.00001
Feb-07	238,199	6,669	0	0.0	0.0	672.0	5.59E+12	9.23E+08	1.05	2927.1	196.1	0.388	1084.7	0.0031	8.7	8.0	0.0093	0.0000259	0.0000001	0.8541311	0.0023875	0.0000023	0.0033	0.0000000	0.48	0.39	0.0002	2.80	0.51	0.02	0.0007	0.00001
Mar-07	256,206	2,646	0	0.0	0.0	718.3	5.99E+12	3.67E+08	0.99	2976.5	213.2	0.388	1161.9	0.0031	9.3	8.5	0.0093	0.0000279	0.0000000	0.8579967	0.0025691	0.0000009	0.0036	0.0000000	0.51	0.42	0.0001	2.99	0.55	0.02	0.0003	0.00001

Unit 2

Month	Coal Throughput (tons)	Fuel Oil Throughput (gallons)	SS&M Outage Excess Emissions (lbs)	SS&M PM	SS&M PM10	Operating Hours	Heat Input (coal)	Heat Input (oil)	Inlet Sulfur Rate	Inlet Sulfur tons	Outlet SO2 Tons	NOx Rate	NOx tons	PM Emission Rate (lb/mmbtu)	PM Tons	PM10 Tons	BE Emission Factor (coal)	Be tons (coal)	Be tons (oil)	Lead Emission Factor (coal)	Lead tons (coal)	Lead tons (oil)	Mercury tons (coal)	Mercury tons (oil)	Flourides Tons	Sulfuric Acid tons (coal)	Sulfuric Acid tons (oil)	TRS/RSC Tons	Ozone (VOCs) tons (coal AP42)	Ozone (VOCs) (coal EPRI)	Ozone (VOCs) tons (oil AP42)	Ozone (VOCs) tons (oil EPRI)
Apr-06	2,909	42,504	7,000	2.1	1.5	45.8	6.98E+10	5.93E+09	0.60	22.7	1.0	0.189	7.2	0.0030	0.1	0.1	0.0102	0.0000004	0.0000004	0.9146564	0.0000319	0.0000145	0.0000	0.0000003	0.01	0.00	0.0010	0.04	0.01	0.00	0.0043	0.00009
May-06	226,580	85,300	12,200	3.7	2.6	728.3	5.45E+12	1.19E+10	1.02	2783.8	180.2	0.319	870.6	0.0030	8.2	7.5	0.0087	0.0000237	0.0000008	0.8155335	0.0022209	0.0000291	0.0032	0.0000006	0.46	0.38	0.0028	2.73	0.49	0.02	0.0085	0.00018
Jun-06	262,507	16,968	1,400	0.4	0.3	719.5	6.04E+12	2.37E+09	1.01	3042.2	192.8	0.332	1003.0	0.0030	9.1	8.3	0.0080	0.0000243	0.0000002	0.7701999	0.0023259	0.0000058	0.0036	0.0000001	0.53	0.40	0.0003	3.02	0.56	0.02	0.0017	0.00004
Jul-06	266,978	5,178	100	0.0	0.0	743.5	6.27E+12	7.24E+08	0.99	3108.3	168.3	0.324	1015.2	0.0030	9.4	8.6	0.0079	0.0000247	0.0000001	0.7588449	0.0023775	0.0000018	0.0037	0.0000000	0.54	0.43	0.0001	3.13	0.57	0.03	0.0005	0.00001
Aug-06	267,425	18,284	900	0.3	0.2	743.0	6.26E+12	2.54E+09	1.01	3149.7	195.3	0.338	1058.3	0.0030	9.4	8.6	0.0081	0.0000253	0.0000002	0.7723057	0.0024171	0.0000062	0.0037	0.0000001	0.54	0.43	0.0005	3.13	0.57	0.03	0.0018	0.00004
Sep-06	249,124	34,916	4,000	1.2	0.8	693.3	5.77E+12	4.85E+09	0.99	2862.5	154.0	0.323	932.0	0.0030	8.6	8.0	0.0079	0.0000227	0.0000003	0.7588449	0.0021878	0.0000119	0.0035	0.0000003	0.50	0.39	0.0014	2.89	0.53	0.02	0.0035	0.00008
Oct-06	265,834	11,329	0	0.0	0.0	744.0	6.25E+12	1.57E+09	1.05	3277.4	231.4	0.351	1097.7	0.0024	7.5	6.9	0.0068	0.0000212	0.0000001	0.6797169	0.0021251	0.0000038	0.0037	0.0000001	0.53	0.47	0.0004	3.13	0.57	0.03	0.0011	0.00002
Nov-06	253,965	3,796	0	0.0	0.0	720.0	6.00E+12	5.27E+08	1.01	3019.3	239.7	0.368	1103.4	0.0024	7.2	6.6	0.0071	0.0000213	0.0000000	0.7028574	0.0021072	0.0000013	0.0035	0.0000000	0.51	0.43	0.0001	3.00	0.55	0.02	0.0004	0.00001
Dec-06	264,957	3,533	0	0.0	0.0	744.0	6.23E+12	4.93E+08	0.98	3059.0	201.2	0.373	1161.9	0.0024	7.5	6.9	0.0079	0.0000247	0.0000000	0.7625451	0.0023752	0.0000012	0.0037	0.0000000	0.53	0.42	0.0001	3.12	0.57	0.03	0.0004	0.00001
Jan-07	262,981	28,033	2,200	0.7	0.5	744.0	6.17E+12	3.90E+09	0.97	2978.7	217.8	0.373	1151.3	0.0024	7.4	6.8	0.0079	0.0000243	0.0000003	0.7587180	0.0023405	0.0000096	0.0037	0.0000002	0.53	0.42	0.0009	3.09	0.56	0.03	0.0028	0.00006
Feb-07	233,420	38,109	6,300	1.9	1.3	666.3	5.48E+12	5.27E+09	1.07	2928.3	198.9	0.359	984.3	0.0024	6.6	6.0	0.0070	0.0000192	0.0000004	0.6959919	0.0019064	0.0000129	0.0032	0.0000003	0.47	0.39	0.0010	2.74	0.50	0.02	0.0038	0.00008
Mar-07	263,270	16,254	1,600	0.5	0.3	743.0	6.15E+12	2.26E+09	1.01	3118.0	213.7	0.377	1160.4	0.0024	7.4	6.8	0.0070	0.0000217	0.0000002	0.6991418	0.0021511	0.0000055	0.0037	0.0000001	0.53	0.43	0.0006	3.08	0.56	0.03	0.0016	0.00003

Fuel Quality Data

Month	Heating Value (btu/lb) Coal	Heating Value (btu/lb) Fuel Oil	Fuel Oil Density (lb/gal)	Ash %	Sulfur Content Coal %	Sulfur Content Oil %
Apr-06	11,995	19,399	7.19	9.47	0.60	0.25
May-06	11,862	19,367	7.19	10.93	0.64	0.33
Jun-06	11,504	19,387	7.19	11.74	0.59	0.19
Jul-06	11,735	19,445	7.19	11.96	0.63	0.23
Aug-06	11,703	19,389	7.17	11.70	0.62	0.28
Sep-06	11,573	19,435	7.15	11.96	0.61	0.41
Oct-06	11,761	19,385	7.15	10.98	0.68	0.32
Nov-06	11,805	19,355	7.17	10.53	0.66	0.28
Dec-06	11,756	19,462	7.17	9.51	0.62	0.31
Jan-07	11,730	19,425	7.16	9.57	0.62	0.33
Feb-07	11,735	19,356	7.15	10.66	0.64	0.28
Mar-07	11,687	19,424	7.15	10.60	0.63	0.37

WEPCO COMPLIANCE SUMMARY

(12 month rolling total emission)

For the Period ending: **March-2007**

Pollutant (PSD)	WEPCO Trigger (tons)	UNIT ONE			UNIT TWO		
		Adj. Baseline	Adj. Emissions	WEPCO Met? (Y/N)	Adj. Baseline	Adj. Emissions	WEPCO Met? (Y/N)
NOx (w/OF/	40	14341	13973	Y	12569	10457	Y
NOx (w/o O	40	14341	13973	Y	12569	11638	Y
SOx	40	1999	1700	Y	1902	1683	Y
PM (stack)	25	189	112	Y	101	88	Y
PM10 (Stac	15	174	103	Y	93	81	Y
VOC (ozone	40	6.4	6.9	Y	5.8	6.4	Y
Lead	0.6	0.05	0.03	Y	0.03	0.02	Y
Beryllium	0.0004	0.00060	0.00032	Y	0.00030	0.00025	Y
Mercury	0.1	0.042	0.045	Y	0.039	0.042	Y
Flourides	3	5.6	6.0	Y	5.1	5.6	Y
Sulfuric Acic	7	4.3	5.0	Y	3.9	4.6	Y
TRS/RSC	10	33.5	36.0	Y	30.8	33.1	Y

BASELINE WEPCO DATA

WEPCO Compliance Baseline Period: March 1, 2000 to February 28, 2002

	UNIT ONE				UNIT TWO		
Parameter/Emissions	Total	per hour rate	lb/mmbtu		Total	per hour rate	lb/mmbtu
Heat Input (btu)	1.25E+14	7692321075			1.27E+14	7656091981	
Operating Hours	16249.5				16556		
Coal Throughput (tons)	5,252,644	323.2495769			5,327,858	321.808287	
Fuel Oil Throughput (gal)	562,687	34.62795778			447779	27.04632762	
NOx (tons)	26717.48895	1.644203757	0.427492233		25900.53434	1.564419808	0.408673201
SO2 (tons)	3724.69	0.229218542	0.059596717		3918.35	0.236672711	0.061825984
Stack PM (tons)	352.6245813	0.021700642	0.005642157		208.5277666	0.012595299	0.003290268
Stack PM10 (tons)	324.4146148	0.019964591	0.005190785		191.8455452	0.011587675	0.003027047
Beryllium (tons)	0.00111424	6.85707E-08	1.78284E-08		0.000610932	3.6901E-08	9.63963E-09
Lead (tons)	0.097237787	5.98405E-06	1.55585E-06		0.066625055	4.02422E-06	1.05125E-06
Mercury (tons)	0.078480844	4.82974E-06	1.25573E-06		0.080212976	4.84495E-06	1.26565E-06
Flourides (tons)	10.37	0.000638028	0.000165887		10.59	0.00063973	0.000167117
Sulfuric Acid (tons)	8.03	0.000494023	0.000128446		8.12	0.00049034	0.000128092
TRS/RSC (tons)	62.50	0.003846161	0.001		63.38	0.003828046	0.001
Ozone (VOCs) (tons)	11.84	0.000728749	0.000189474		12.00	0.000724738	0.000189323

INTERMOUNTAIN GENERATING STATION
EMISSION FACTOR FACT SHEET

SOURCE	EMISSION FACTOR	UNITS / Formulae	Source / Table	PM Emission Rate (lb/mmbtu) and Coal Trace Concentrations 2006	2007
Stack, PM EF, Unit 1		lb/mmbtu	Stack Test	0.0031	0.0031
Stack, PM EF, Unit 2		lb/mmbtu	Stack Test	0.0030	0.0024
Stack, VOC (coal) Cummulative AP42	0.004292	lbs/ton	AP-42 1.1-13		
Stack, VOC (coal) Cumulative EPRI	8.2	lb/10^12 btu	EPRI Trace SubstancesReport		
Stack, VOC (oil) Cummulative AP42	0.2	lb/1000gal	AP-42 1.1-13		
Stack, VOC (oil) Cummulative EPRI	31	lb/10^12 btu	EPRI Trace SubstancesReport		
Stack, Be (coal)	1.2*(C/A*PM)^1.1	lb/10^12 btu	AP-42 1.1-15	0.41	0.41
Stack, Pb (coal)	3.4*(C/A*PM)^0.80	lb/10^12 btu	AP-42 1.1-15	6	6
Stack, Hg (coal) Control Efficiency	76.9	%	Source Testing	0.06	0.06
Stack, F (coal) Control Efficiency	97	%	EPRI Trace SubstancesReport	67	67
Stack, Be (0il)	0.2	lb/10^12 btu	EPRI Trace SubstancesReport		
Stack, Be (oil) Control Efficiency	30	%	EPRI Trace SubstancesReport		
Stack, Pb (oil)	7	lb/10^12 btu	EPRI Trace SubstancesReport		
Stack, Pb (oil) Control Efficiency	30	%	EPRI Trace SubstancesReport		
Stack, Hg (oil)	0.46	lb/10^12 btu	EPRI Trace SubstancesReport		
Stack, Hg (Control Efficiency)	76.9	%	Source Testing		
Stack, H2SO4 (coal)	6.45986	lb/ton	Source Testing		
Stack, H2SO4 Control Efficiency	92.02	%	Source Testing		
Stack, H2SO4 (oil)	0.00245	lb/gal	So Co Paper		
Stack, TRS/RSC	0.001	lb/mmbtu	Eng. Calc.		
Stack SS&M (PM10)	0.42	lbs/ton	AP42 T1.1-6		
Stack SS&M (PM)	0.6	lbs/ton	AP42 T1.1-6		
Stack SS&M (PM10)	71	%	AP42 T1.1-6		
NOx relationship to Fuel Quality (Baseline)	0.1091x + 0.3341	lb/mmbtu	Plant NOx Basis Worksheet		
NOx relationship to Fuel Quality (No OFA)	0.0848x + 0.2992	lb/mmbtu	Plant NOx Basis Worksheet		
U1 SO2 relationship to Fuel Quality	$0.0817x^2$	lb/mmbtu	U1 SO2 Basis Worksheet		
U2 SO2 relationship to Fuel Quality	$0.0728x^2$	lb/mmbtu	U2 SO2 Basis Worksheet		

INTERMOUNTAIN GENERATING STATION
Analysis Protocol

Refer to the following groups for description of general column headings in each WEPCO worksheet.
This protocol overview is provided to ensure consistency and validation in the following areas:

1. - Input Data
2. - Production & Emission Calculations
3. - WEPCO Analysis: Actuals to Actuals comparison, and adjusting for increases not attributable to the modifications.

Data Used	Data Sources
Fuel Throughput - Coal	Calibrated feeders located at each mill. Adjusted annually based upon coal stockpile inventory analysis.
Fuel Throughput - Fuel Oil	Flowmeters for each unit.
Fuel Quality - Coal HHV	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Coal ASH	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Coal Sulfur	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Coal Trace Elements	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil HHV	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil Density	ASTM Sampling and Laboratory Analysis - As fired
Fuel Quality - Oil Sulfur	ASTM Sampling and Laboratory Analysis - As fired
Startup, Shutdown, & Malfunction Emissions	Obtained from excess emission reports made to UDAQ, utilizing AP-42 factors for uncontrolled sources.
Operating Hours	Boiler operating data obtained from 40 CFR Part 75 CEMS EDR
Inlet Sulfur Rate	Actual CEM measurement taken at scrubber inlet pursuant to 40 CFR Part 60 requirements
Outlet Sulfur Emissions	Actual CEM measurement taken at stack pursuant to both 40 CFR Part 60 and Part 75 requirements
NOx Rate	Actual CEM measurement taken at stack pursuant to both 40 CFR Part 60 and Part 75 requirements
PM Emission Rate	From annual 40 CFR Part 60 App.A. Method 5B stack testing

Production / Emission Calculations	Basis
SS&M PM and PM10 Excess Emissions	Utilizing AP-42 & SS&M emissions (in pounds), converted to tons
Heat Input	Multiplies fuel quality (HHV) by throughput, and conversion factors
Inlet Sulfur Tonnage	Multiples inlet sulfur rate by heat input, and conversion factors
NOx emissions in tons	Multiplies NOx emission rate by heat input, and conversion factors
PM emissions in tons	Multiplies PM emission rate by heat input, and conversion factors
PM10 emissions in tons	Multiplies PM10 emission rate by heat input, and conversion factors
Be emission factor	Calculated with AP-42 (coal) or EPRI's Trace Substance Report (oil), using trace concentration and ash content.
Be emissions	Utilizes Be emission factors and heat input, and conversion factors
Pb emission factor	Calculated with AP-42 (coal) or EPRI's Trace Substance Report (oil), using trace concentration and ash content.
Pb emissions	Utilizes Pb emission factors and heat input, and conversion factors
Hg emissions	Utilizes control efficiencies determined by stack testing
Flourides/HF emissions	Calculated utilizing EPRI's Trace Substance Report and trace concentration, and conversion factors
H2SO4 emissions	Utilizes control efficiencies determined by stack testing, and conversion rates based upon So. Co.'s paper
TRS/RSC sulfur compound emissions	Uses a factor derived on the basis of AP-42 Table 1.1-3, Footnote (b).
VOC's	Using a summation of individual VOC specific emission factors from both AP-42 and EPRI's Trace Substance Report to resolve a single cummulative EF, mulitplying either throughput or heat input, and conversion factors.

WEPCO Analysis	Description
Actual emissions	Summation of 12 rolling months of emissions calculated on the PODUCTION DATA worksheet.
Heat Input	Summation of 12 rolling months of heat input calculated on the PRODUCTION DATA worksheet.
Operating hours	Summation of 12 rolling months of hours calculated on the PRODUCTION DATA worksheet.
Inlet SO2 tonnage	Summation of 12 rolling SO2 tons to the scrubber inlet calculated on the PRODUCTION DATA worksheet.
Effective 12 month SO2 Inlet rate	Derived from dividing 12 month inlet tonnage by 12 month heat rate.
Representative rate	Represents rate predicted to have occurred during baseline if this period's fuel was utilized. Based upon historical operating and emissions data.
Restructured Baseline	Represents predicted emissions that would have occurred during baseline period at the representative rate, using the baseline period heat input.
Excluded emissions	Difference between the actual baseline and the restructured baseline, indicating non-mod emission increases that could be accommodated during baseline period.
Non-OFA Predicted Rate	Expected emssion rate without the benefit of OFA, based upon historical operating and emissions data.
Non-OFA Predicted emissions	Expected emssions without the benefit of OFA, multiplying predicted rate by actual heat input.
Non-OFA Emission difference from actual	This is the calculated benefit from OFA which must be discounted to show WEPCO compliance for the Dense Pack Project.
Discounted actual emissions	Emissions to which the WEPCO test applies, which discounts any OFA benefit, and excludes increases not attributible to the modification.
Baseline (adjusted)	The basis to which the WEPCO test compares, utilizing the baseline emission rate, adjusted to hours of operation.
Discounted Difference	The difference between WEPCO period emissions and Baseline period emissions.
PSD?	An IF statement argument that compares the difference against the PSD significance level.